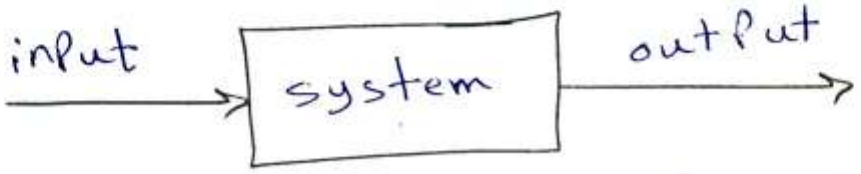
Digital Control

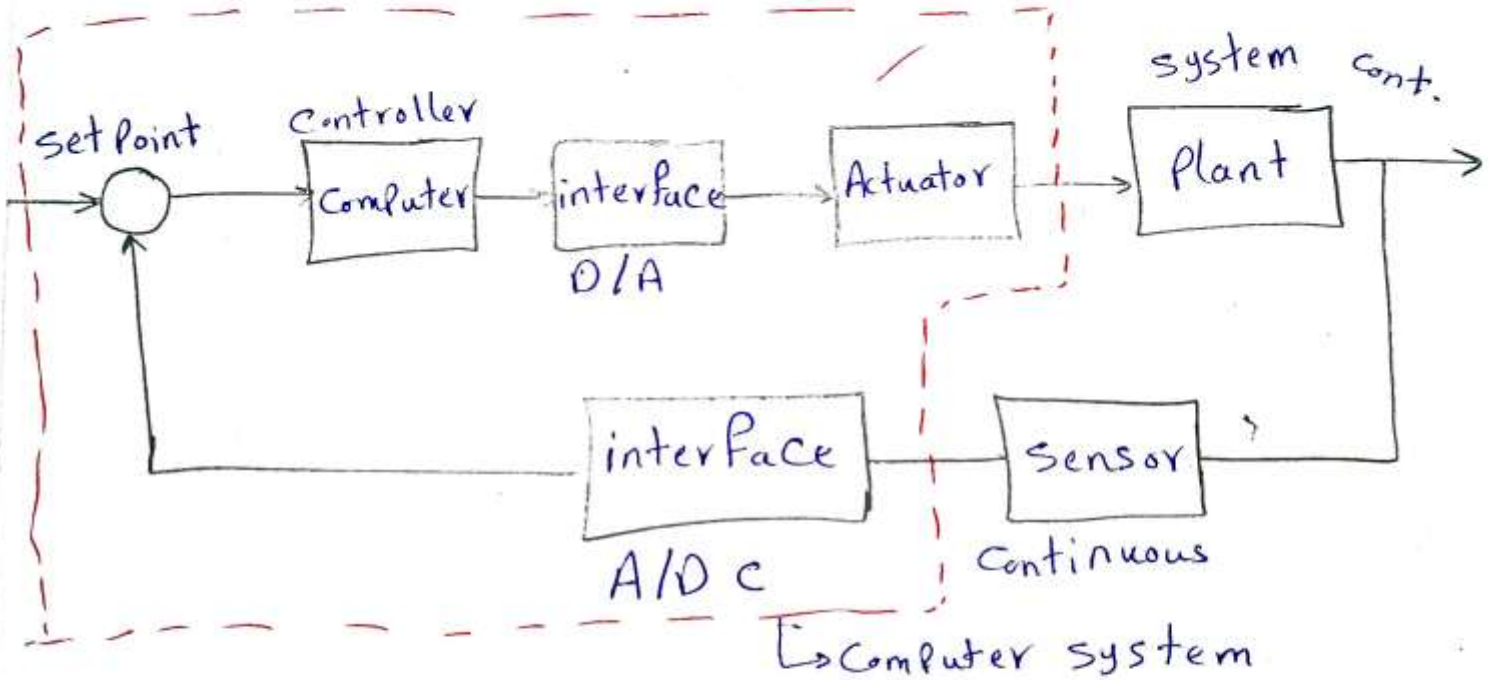
1st session

⇒ Why control ?



→ we need to improve system dynamics.

→ all systems are continuous, so we convert it to digital ⇝ we study analog first.



⇝ Control system phases

1) Modeling
2) Analysis
3) Design
4) Implementation.

Contents of this term

1) Experiments

* ADC (Hardware)
* DAC (Hardware)
* Effect of sampling (Matlab)

2) Model Based design:

* Matlab ⇒ design Controller.
* Arduino (Micro Controllers) (Hardware)
  - Code
  - Embedded Code (Matlab - Arduio interface)

3) signal Conditioning
   - Input interface (sensors)
   - output interface (Drivers) (H-Bridge)

4) System identification.

5) Course Project ⇒ (inverted Pendiulim)

optional ⟶ Mobile Robot.